

COLEOPTERA PHYTOPHAGA

SECT. EUPODA

FAM. SAGRIDÆ

by MARTIN JACOBY

WITH I COLOURED PLATE



THE SAGRIDÆ form the first section *Eupoda* of the four divisions in which the Phytophaga have been divided; they contain the true *Sagras*, the *Donacias* and the *Criocerini*, all of which may be comparatively easily recognised by the head being constricted behind the eyes and produced anteriorly as in the Longicornia. The different groups placed in this family are rather a conglomeration of forms whose affinities are not always clearly established but it is at present the best arrangement put forward by Lacordaire and Chapuis.

General Characters. — In this family the antennæ are not closely approached at the base but separated, the thorax is narrower than the elytra and without lateral margins and the first abdominal segment is longer than the following ones; the antennæ are mostly long and filiform, giving the insects the appearance of a Longicorn; the eyes are either entire or emarginate; the thorax is of variable shape and has often a transverse sulcus, the elytra cover always the pygidium.

The legs are generally robust, the posterior femora frequently strongly incrassate; the claws are generally simple, but sometimes bifid.

The geographical distribution of the family is very erratic, some genera being peculiar to certain parts of the globe only while others have representatives in most parts.

Lacordaire has divided the *Sagridæ* in eight groups containing 15 genera, to which several other have since been added. Two of these (*Rhæbinæ* and *Aulacoscelinæ*) are here omitted.

The groups are arranged as follows :

Thorax without lateral margins.

- | | | | |
|---|-------------------------------------|-----------|---------------|
| a. <i>Metasternum raised between the intermediate legs.</i> | | : | MECYNODERINÆ. |
| b. <i>Metasternum not raised, the sutural angles of the elytra pointed.</i> | | | AMETALLINÆ. |
| c. <i>Sutural angles of the elytra obtuse.</i> | | | |
| d. <i>Thorax broadest at the base.</i> | | | CARPOPHAGINÆ. |
| e. — — — — — | <i>anteriorly or at the middle.</i> | | |

- f. *Anterior angles of the thorax thickened.* SAGRINÆ.
 g. — — *obsolete or rounded.*
 h. *The intermediate coxæ subcylindrical, claws bifid* ORSODACNINÆ.
 i. — — *subglobular, claws simple divided at the base* MEGAMERINÆ.

The genus *Aulacoscelis*, Stal, has been likewise included by Chapuis amongst the *Sagrina*, but in my opinion Stal has rightly placed them amongst the *Chrysomelidæ* proper or at least with greater right of doing so, as the third joint of the tarsi is not bilobed and therefore agrees in that respect with the last named family.

GROUP MEGAMERINÆ

General characters. — The *Megamerinæ* show great affinities with the *Longicornia* and are not easily separated from that family; they contain species of large size having long and slender antennæ although scarcely to such an extent as in the *Longicornia*; the eyes are large, entire and strongly granulate, the thorax is constricted anteriorly and posteriorly and is without lateral margins.

KEY OF THE GENERA

1. — *Sides of thorax with a tooth* Genus CHEILOXENA.
 2. — — — *simple.*
 a. — *Last joint of maxillary palpi hatched-shaped* Genus MEGAMERUS.
 b. — — — — *oval, longer than broad, truncate* Genus RHAGIOSOMA.
 c. — — — — *oval.*
 d. — *Tongue entire* Genus PRIONESTHIS.
 e. — — *deeply bilobed.*
 f. — *Eyes convex, hemispherical* Genus POLYOPTILUS.
 g. — — *scarcely convex* Genus DUBOULAYIA.
 h. — *Mesosternum obsolete, upper surface pubescent* Genus PSEUDOTOXOTUS.

1. GENUS MEGAMERUS, MAC LEAY

Megamerus. Mac Leay, King, Surv. Austral. App. 2, p. 448 (1827).

Characters. — Body elongate, parallel, antennæ filiform, last joint of maxillary palpi hatched-shaped, eyes large and prominent, thorax constricted at the base, the sides widened and rounded in front, the lateral margins absent, anterior angles rounded, elytra with irregular rows of punctures, smooth and shining; legs robust, the femora (especially the posterior ones) incrassate and dilated in a tooth below, tibiæ strongly widened at the apex, tarsi with thick spongy pubescence below, the first joint of the posterior tarsi having the pubescence divided by a smooth, raised, narrow line, claws simple.

Geographical distribution of species. — The only known species of this genus inhabits Australia.

1. *Megamerus Kingii*, Mac Leay King, Surv. Austr. App. 2, p. 448 (1827) *prionesthis*, Boisduval (Australia).

2. GENUS RHAGIOSOMA, CHAPUIS

Rhagiosoma. Chapuis, Ann. Soc. Ent. Belg. Vol. 21, Bull. p. 143 (1877).

Characters. — The structural characters of this genus almost entirely resemble those of *Megamerus* and in fact the two genera can scarcely be separated; the only differences seem to be the more

elongate and oval-shaped terminal joint of the maxillary palpi and the longer and less strongly dilated tibiae in *Rhagiosoma*, Chapuis in describing the genus only compares it with *Polyoptilus* to which it is allied to a much smaller degree than to *Megamerus*.

Geographical distribution of species. — Two species are known at present both of which are inhabitants of Madagascar.

1. *Rh. madagascariensis*, Chapuis, Ann. Soc. Ent. Belg. Vol. 21, p. 143 (187) (Nossi-Bé).
2. *Rh. fraternus*, Duvivier, Ann. Soc. Ent. Belg. Vol. 35 (1891) (Madagascar).

3. GENUS DUBOULAIA, BALY

Duboulaia. Baly, Trans. Ent. Soc. Lond. p. 381 (1871).

Characters. — Like the preceding genera, the present one is of elongate shape, the posterior femora are thickened and armed below with a strong tooth; the elytra are covered with fine pubescence, the prosternum is convex and not prolonged posteriorly.

Geographical distribution of species. — The three species known at present are inhabitants of Australia only.

1. *D. flavipennis*, Baly, Trans. Ent. Soc. Lond. p. 382 (1871) (Australia).
2. *D. fulva*, Baly, Cist. Ent. Vol. 2, p. 45 (1879) (Australia).
3. *D. rugosa*, Baly, idem, p. 46 (Australia).

4. GENUS POLYOPTILUS, GERMAR

Polyoptilus. Germar, Linn. Ent. Vol. 3, p. 230 (1848).

Ametalla. Newman, The Zoologist, p. 111 (1851).

Characters. — Elongate, shaped like a species of Longicorn, eyes convex, oblong, antennæ very elongate in the male. The second joint half the length of the third one, the others gradually lengthened, very elongate; thorax constricted at base and apex, without lateral margins; elytra punctured in rows; legs elongate, the posterior femora dentate in both sexes, claws simple, widely separated, prosternum very narrow and convex.

Geographical distribution of species. — All the known species are inhabitants of Australia.

1. *P. Erichsoni*, Germar, Linn. Ent. Vol. 3, p. 230 (1846); *Lacordairei*, Germar, idem, p. 231 (*Erichsoni*) ♀; *décolor*, Newman, The Zoologist, p. 111 (1851) (Australia).
2. *P. gracilis*, Blackburn, Trans. Roy. Soc. S. Austr. p. 134 (1890) (Australia).
3. *P. irregularis*, Lea, Proc. Linn. Soc. N. S. Wales, p. 632 (1894) (Australia).
4. *P. pachytoides*, Baly, Cist. Ent. Vol. 2, p. 47 (1879) (Australia).
5. *P. Pascoei*, Baly, idem, p. 47 (Australia).
6. *P. robustus*, Blackburn, Trans. Roy. Soc. N. S. Wales, p. 622 (1894) (Australia).
7. *P. Waterhousei*, Baly, Cist. Ent. Vol. 2, p. 46 (1879) (Australia).

5. GENUS PRIONESTHIS, LACORDAIRE

Prionesthis. Lacordaire, Mém. Soc. Sc. Liège, Vol. 3, p. 8 (1845).

Characters. — Of elongate shape, the tongue entire, the eyes large, oval, perpendicular, entire and strongly granulate. Thorax elongate, much narrower than the elytra, more strongly constricted anteriorly than posteriorly; posterior femora very large, oval, channelled and unarmed (♀?) below; prosternum narrow, rounded at the base.

Geographical distribution of species. — The single species known, inhabits Australia.
 1. *Pr. funerarius*, Lacordaire, Mon. Phyt. Vol. 1, p. 10 (1845) (Australia).

The species was described from a single, apparently female specimen and seems to be extremely rare as I have never seen a specimen.

6. GENUS PSEUDOTOXOTUS, BLACKBURN

Pseudotoxotus. Blackburn, Proc. Linn. Soc. N. S. Wales, Vol. 3, p. 1470 (1889).

Characters. — This genus seems closely allied to *Diaphanops*; it differs from *Megamerus* in the oblong-ovate apical joint of the maxillary palpi, from *Chiloxena* in the absence of the lateral teeth of the thorax, from *Duboulaia* in the strongly convex eyes, from *Prionesthis* in the dentate posterior femora, from *Carpophogus*, *Diaphanops*, *Mecynodera* and *Ametalla* in the long antennæ and from *Polyoptilus* in the dense pubescence of the upper surface. A single species has been described which inhabits Australia.

1. *P. lineata*, Blackburn, Proc. Linn. Soc. N. S. Wales, Vol. 3, p. 1470 (1889) (Australia).

7. GENUS CHEILOXENA, BALY

Cheiloxena. Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 254 (1860).

Characters. — Of robust and elongate shape, the head perpendicular, truncate anteriorly at the sides, the epistome free and articulated, antennæ long, the third joint the longest, the basal joint short and thick, the second nearly moniliform; thorax narrowed at the base, without lateral margins, the sides with some small teeth; elytra irregularly punctured, clothed with scale-like pubescence; femora fusiform, unarmed; tarsi rather robust, claws bifid at the base.

This genus is well distinguished from any other genus of Phytophaga by a free and movable epistome and the perpendicular head.

Geographical distribution of species. — Like the preceding genera, *Chiloxena* is only found in Australia. Three species are known at present.

1. *Ch. Westwoodi*, Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 254 (1860) (Australia).
2. *Ch. Frenchae*, Blackburn, Trans. Roy. Soc. S. Austral. p. 138 (1893) (Australia).
3. *Ch. insignis*, Blackburn, idem, p. 39 (1896) (Australia).

GROUP CARPOPHAGINÆ

The general appearance of the insects which form the present and the second group of Chapuis' arrangement, resembles that of some species of Bruchidæ or Curculionidæ; that they however form undoubtedly part of the Phytophaga is shown by the structure of the eyes and the antennæ, the latter being filiform in shape; the elytra cover entirely the abdomen and the thorax is much narrower than the elytra; the prosternum is distinct, the posterior femora are thickened, strongly dentate and the claws are simple; two genera are placed in this group, both inhabit Australia.

1. GENUS CARPOPHAGUS, MAC LEAY

Carpophagus. Mac Leay, King. Surv. Austral. App. 2, p. 447 (1827).

Characters. — Body short, broad and robust, antennæ slender, thorax subcylindrical, strongly narrowed anteriorly without anterior angles; scutellum broadly rounded; elytra very broad, covering

the pygidium partly only, femora very robust, the posterior ones with a strong tooth, tarsi short and broad, the third joint deeply bilobed.

Geographical distribution of species. — Like the preceding genera the present one is entirely confined to Australia, two species are known.

1. *C. Banksiæ*, Mac Leay, King. Surv. Austral. p. 447, f. 1 (1827); Gray, Griffith's Anim. Kingd. Ins. Vol. 2, p. 126, pl. 67, fig. 1; Boisduval, Voy. Astrol. Col. p. 297 (1835); Lacordaire, Mon. Phyt. p. 13 (1845) (Australia).
2. *C. excavatus*, Baly, Trans. Ent. Soc. Lond. p. 382 (1871) (Australia).

2. GENUS DIAPHANOPS, SCHÖNHERR

Diaphanops. Schönherr, Gen. Curcul. Vol. 8, p. 392 (1845).

Rynchostomis. Lacordaire, Mon. Phyt. Vol. 1, p. 14 (1845).

Characters. — Of oblong shape, the head produced into a trunklike projection, antennæ subfiliform, inserted in front of the eyes, the latter entire, rounded; thorax subcylindrical, narrowed at the base, rounded anteriorly; elytra much wider at the base than the thorax, narrowed at the apex, clothed like the thorax with very short pubescence, legs robust, the posterior femora very strongly widened and armed with a short tooth below, tarsi nearly equal in length, claws simple, prosternum not pointed at the posterior end, angularly deflexed.

Geographical distribution of species. — The three known species of this genus inhabit Australia only.

1. *D. Meyricki*, Blackburn, Proc. Linn. Soc. N. S. Wales, Vol. 9, p. 458 (1889) (Australia).
2. *D. parallelus*, Blackburn, idem, p. 459 (1889) (Australia).
3. *D. Westermanni*, Boheman, Schönherr, Gen. Curcul. Vol. 8, p. 343 (1845); Blackburn, Proc. Linn. Soc. N. S. Wales, Vol. 4, p. 457 (1889); *curculionides*, Lacordaire, Mon. Phyt. Vol. 1, p. 15 (1845) (Australia).

GROUP MECYNODERINÆ

The single genus which form this group is a kind of transitional form between the *Sagridæ* and the *Crioceridæ* of both of which it has some structural characters; the general shape however much resembles that of *Diaphanops* from which the strongly raised metasternum at once distinguishes it; the head is like the last named genus prolonged anteriorly, the eyes are rather large and slightly emarginate, the antennæ are robust, filiform, the lower joints are short, scarcely longer than broad, terminal joints elongate; the thorax resembles much that of *Diaphanops*, but is of more subquadrate shape.

The single genus which form this section is confined to Australia.

1. GENUS MECYNODERA, HOPE

Mecynodera. Hope, Col. Man. Vol. 3, p. 181 (1840).

Characters. — Head produced, eyes small, antennæ filiform, about half the length of the body; thorax subcylindrical, the angles oblique; prosternum narrow, convex; metasternum more or less produced and terminating into a point; posterior femora strongly dilated, dentate, tarsi rather broad, claws simple.

Geographical distribution of species. — There are three species known at present.

1. *M. Balyi*, Clark, Journ. of Ent. Vol. 2, p. 248 (1864); Westwood, Trans. Ent. Soc. Lond. (3), Vol. 2, p. 271 (1864) (Australia).

2. *M. coxalgica*, Boisduval, Voy. Astrol. Col. p. 535 (1835); Lacordaire, Mon. Phyt. Vol. 1 p. 17 (1845); *picta*, Hope, Col. Man. Vol. 3, p. 182, pl. 2, f. 6 (1840) (Australia).
var. *Kingi*, Gray, Griffith's Anim. Kingd. Ins. Vol. 2, pl. 67, f. 2 (1832).
3. *M. Wickhami*, Waterhouse, Ann. Mag. Nat. Hist. (5), Vol. 15, p. 342 (1885) (Australia).

GROUP SAGRINÆ

This group contains the typical forms of the first division the *Eupoda*, they are all species of large size and generally metallic colours, they possess structural characters of their own and not found together in other groups; the head is produced and deeply obliquely grooved above the eyes, the antennæ have the basal joints moniliform and are long and robust; the thorax is subcylindrical in shape and generally thickened or even tuberculiform at the anterior angles; the prosternum is narrow and the legs are robust, the posterior femora are often enormously thickened and generally provided with one or several teeth in the male insect, the same remark applies to the tibiæ, the tarsi are slender and the claws very long.

Two genera are at present included in this group *Sagra* and *Atalasis*. Of these the first named genus is exclusively confined to the old world and very rich in species, the other genus is the only representative of the group in South America.

I. GENUS SAGRA, FABRICIUS

Sagra. Fabricius, Ent. Syst. Vol. 1, (2), p. 51 (1792).

Characters. — Of oblong or elongate shape, of metallic coloration and smooth; the membranous tongue divided to the base, antennæ generally extending to the middle of the elytra, the lower joints partly moniliform, the terminal ones elongate less metallic than the basal joints; eyes distinctly emarginate, surrounded posteriorly by an orbit; thorax always much narrower than the elytra without lateral margins; scutellum very small; elytra with the extreme basal margin often raised, punctate-striate, the intertices either smooth or rugose; legs robust, the intermediate femora often, the posterior ones always strongly dentate in the male, sometimes with a space of dense light coloured pubescence at the base; tibiæ of various structure with one or more teeth, claws simple, prosternum narrow; more than 60 species have been described.

Geographical distribution of species. — The genus *Sagra* is confined to India, the Malayan Islands, Africa and Madagascar.

African species :

1. *S. adonis*, Lacordaire, Mon. Phyt. Vol. 1, p. 61 (1845) (Guinea).
2. *S. aenea*, Olivier, Ent. Vol. 5, p. 500, pl. 1, fig. 7, Lacordaire, Mon. Phyt. p. 56 (1845) (Sierra Leone).
3. *S. amethystina*, Guérin, Icon. Règn. Anim. p. 256 (1845), Lacordaire, Mon. Phyt. p. 56 (1845) (Guinea).
a. var. *emarginata*, Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 246 (1860).
b. var. *Lacordairei*, Thomson, Arch. Ent. Vol. 1, p. 411 (1857).
c. var. *lucida*, Baly (spec. dist. ?) Trans. Ent. Soc. Lond. p. 245 (1860).
4. *S. Parryi*, Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 247 (1862) (Old Calabar).
5. *S. bicolor*, Lacordaire, Mon. Phyt. p. 55 (1845), Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 249 (1860) (Tropical Africa).
 ♂ *natalensis*, Thomson, Arch. Ent. Vol. 1, p. 396 (1857).
 festiva, Gerstäcker, Monatsb. Berl. Akad. Wiss. p. 636 (1855).
6. *S. Cambierie*, Duvivier, Ann. Soc. Ent. Belg. Vol. 33 (1889), p. 128 (Tabora, Oriental Africa).
7. *S. cyanea*, Dalman, Anal. Ent. p. 67, p. 72 (1823), Lacordaire, Mon. Phyt. p. 67 (1845) (Sierra Leone).
8. *S. dentipes*, Fabricius, Mant. Ins. Vol. 1, p. 66 (1787); Lacordaire, Mon. Phyt. p. 29 (1845) (Cap).
9. *S. Derchii*, Gestro, Ann. Mus. Stor. Nat. Genova, Vol. 15, 1895, p. 431 (Bogos).
10. *S. Deyrollei*, Thomson, Arch. Ent. Vol. 2, p. 203 (1858) (Gaboon).
11. *S. Dohrni*, Baly, Trans. Ent. Soc. Lond. p. 253 (1860) (Guinea).

12. *S. ferox*, Baly, Journ. Linn. Soc. Lond. Vol. 14, p. 338 (1879) (Oriental Africa).
S. longifemorate, Fairmaire, Ann. Soc. Ent. Belg. Vol. 28 (1884).
S. opaca, Jacoby, Trans. Ent. Soc. Lond. p. 189, pl. 7, fig. 7 (1888).
S. longipes, Kolbe, Deutsch. Ost Africa, Col. Vol. 4, p. 324 (1898).
13. *S. Galinieri*, Lacordaire, Mon. Phyt. p. 64 (Abyssinia).
13. *S. Javeti*, Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 240 (1860) (Pt. Natal).
14. *S. Johnstoni*, Gahan, Proc. Zool. Soc. Lond. p. 745 (1893) (Central Africa).
15. *S. Kirbyi*, Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 250 (1860) (Congo).
15. *S. Kolbei*, Clavareau, Cat. Sagrides in Ann. Soc. Ent. Belg. (1900) (Usambara).
S. longipes, Kolbe, (nom. preocc.)
16. *S. Livingstoni*, Baly, Ann. Nat. Hist. (3) p. 434 (1864) (Zambèze).
17. *S. luctuosa*, Fairmaire, Ann. Soc. Ent. Fr. Vol. 7, p. 347 (1887) (Somali).
18. *S. Muelleriana*, Quedenfeldt, Berl. Ent. Zeit. Vol. 32, p. 211 (1888) (Kassā).
19. *S. Murrayi*, Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 251 (1860) (White Nile).
var. Stuhlmanni, Kolbe, Deutsch. O. Afr. Vol. 4 (1898).
20. *S. nitidiventris*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 35, p. 302 (1891) (Somali).
21. *S. senegalensis*, Klug, Erman. Reise. Atl. p. 45 (1835) (Senegal).
22. *S. Signoreti*, Thomson, Arch. Ent. Vol. 2, p. 204 (1858) (Gaboön).
22. *S. Stevensi*, Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 241 (1860) (White Nile).
23. *S. striatipennis*, Jacoby, Novit. Zool. Vol. 1, p. 508 (1894) (Afr. Or.).
S. sulcipennis, Kolbe, D. O. Afr. Vol. 4, p. 325 (1898).
24. *S. tibialis*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 35, p. 302 (1891) (Somali).
25. *S. tristis*, Fabricius, Suppl. Ent. Syst. p. 104 (1798) (Guinea).
26. *S. violacea*, Olivier, Enc. Méth. Vol. 4, p. 128; Lacordaire, Mon. Phyt. 57 (Guinea).
S. amethystina, ♀ (?) Guérin, Icon. Règn. Anim. p. 256.

Malayan species :

27. *S. abdominalis*, Jacoby, Stett. Ent. Zeit. p. 52 (1895) (Pura, Mt. Ator, Australia, Malay. Arch.).
28. *S. borneensis*, Jacoby, Ann. Soc. Ent. Belg. Vol. 42, p. 352 (Borneo).
29. *S. Buqueti*, Lesson, Ill. Zool. pl. 30 (1831) (Jura).
S. Boisduvali, Dupont, Mag. Zool. Vol. 9, pl. 32 (1832).
30. *S. chrysochlora*, Lacordaire, Mon. Phyt. p. 35 (1845) (Java).
31. *S. femorata*, Drury, Ill. Exot. Ins. Vol. 2 (1773) (Ind. Archip. China, Ceylon).
S. Druryi, Lacordaire, Mon. Phyt. p. 32 (1845).
S. femorata, Fabricius, Spec. Ins. Vol. 1, p. 115 (1781).
S. tridentata, ♂, Weber, Obs. Ent. p. 62 (1801).
var. Weberi, Lacordaire, Mon. Phyt. p. 50 (1845).
32. *S. Peteli*, Lacordaire, Mon. Phyt. p. 44 (1845) (Java).
var. pygmaea, Lacordaire, idem, p. 53.
32. *S. Pfeifferæ*, Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 239 (1860) (Borneo).
34. *S. puncticollis*, Jacoby, Ann. Mus. Stor. Nat. Genova, Vol. 20, p. 188 (1884) (Timor, Flores).
35. *S. quadraticollis*, Lacordaire, Mon. Phyt. p. 40 (1845) (Java).
36. *S. speciosa*, Lacordaire, idem, p. 38 (1845) (Java).
var. splendida, Olivier; Ent. Vol. 5, p. 497 (1807)
37. *S. superba*, Lacordaire, Mon. Phyt. p. 39 (1845) (Java).
var. Fabrici, Lacordaire, idem, p. 52 ♀.
38. *S. rugulipennis*, Weise, Deutsch. Ent. Zeit. p. 202 (1901) (New Guinea).
39. *S. papuana*, Jacoby, Ent. Month. Mag. Vol. 25, p. 203 (1888) (New Guinea).

Indian and China species :

39. *S. brevipes*, Jacoby, Ann. Mus. Stor. Nat. Genova, Vol. 7, p. 148 (1889) (Birmah).
40. *S. carbunculus*, Hope, Ann. Mag. Nat. Hist. Vol. 9, p. 248 (1842) (Sylhet).
41. *S. empyrea*, Lacordaire, Mon. Phyt. p. 31 (1845) (Bengal).
42. *S. fulgida*, Weber, Obs. Ent. p. 62 (1801) (China).
43. *S. heterodera*, Lacordaire, Mon. Phyt. p. 50 (1845) (China).
44. *S. Fansoni*, Baly, Trans. Ent. Soc. Lond. Vol. 5, p. 243 (1860) (Madras).
45. *S. Leechi*, Jacoby, Proc. Zool. Soc. Lond. p. 339 (1888) (China).

46. *S. longicollis* Lacordaire, Mon. Phyt. p. 35 (1845) (India).
 47. *S. Mouhoti*, Baly, Journ. of Entom. p. 193 (1860) (Cambodge).
 48. *S. multipunctata*, Jacoby, Ann. Mus. Stor. Nat. Genova, p. 149 (1889) (Birmah).
 49. *S. mutabilis*, Belg. Ann. Mag. Nat. Hist. (3), Vol. 14, p. 433 (1864) (Siam).
 50. *S. nigrita*, Olivier, Ent. Vol. 5, p. 500 (1807) (Ceylon).
 51. *S. purpurea*, Lichtenstein, Cat. Mus. Hamburg, p. 60 (1796) (China).
 splendida, Weber, Obs. Ent. p. 61 (1801).
 var. formosa, Lacordaire, Mon. Phyt, p. 49 (1845).
 var. ignita, Lacordaire, idem, p. 47 (1845).

Madagascar species :

52. *S. Bontempsi*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 41, p. 197 (1897) (Madagascar).
 53. *S. cœruleata*, Lacordaire, Mon. Phyt. p. 57 (1845) (Madagascar).
 54. *S. Oberthuri*, Duvivier, Ann. Soc. Ent. Belg. Vol. 35, p. 239 (1891) (Madagascar).
 55. *S. Perrieri*, Fairmaire, idem, Vol. 42, p. 424 (1898) (Madagascar).
 56. *S. urania*, Lacordaire, Mon. Phyt. p. 58 (1845) (Madagascar).

2. GENUS ATALASIS, LACORDAIRE

Atalasis. Lacordaire, Mem. Soc. Sc. Liège, Vol. 3, p. 19 (1845).

Characters. — General shape that of the genus *Sagra*. The head oblong, the front separated by angular grooves from the epistome; maxillary palpi with the first joint very short, the second, long, subconical, third joint of similar shape, short, fourth, oval, truncate at the apex; antennæ rather long, slightly thickened at the apical joints, the second joint short, subconical, fourth to the tenth joint of similar shape, more elongate; eyes small, entire. Thorax rather long, much narrower than the base of the elytra, the anterior angles rather swollen; elytra oblong, convex; legs robust, the posterior femora strongly dilated, armed with a strong tooth below; prosternum narrow, rounded posteriorly, metasternum prolonged in front, the first abdominal segment nearly as long as the following three together. A single species is known.

Geographical distribution of species. — The only representative of this genus is found in South America near Buenos-Aires where it seems to be rare.

1. *A. sagroides*, Lacordaire, Mém. Soc. Sc. Liège, Vol. 3, p. 20 (1845); Burmeister, Stett. Ent. Zeit. p. 52 (1877) (Argentine Republic).

GROUP AMETALLINÆ

This group which at present contains a single genus only, is represented by insects of elongate shape, the head is perpendicular and moderately prolonged anteriorly, not constricted behind the eyes, the latter are small, sinuate below, the antennæ are long and slender, the basal joint is short and thick, the second, moniliform, the following joints are gradually lengthened; the thorax is strongly narrowed at the base, of subquadrate shape without distinct lateral margins, the elytra are punctured in rows and end in a point at the sutural angle; the legs are robust, the femora incrassate, the posterior ones greatly and angularly widened and produced at their lower edge into a broad triangular tooth, the claws are simple, the first abdominal segment is as long as the following three joints together, the prosternum is narrow and convex.

1. GENUS AMETALLA, HOPE

Ametalla. Hope, Col. Man. Vol. 3, p. 179 (1840).

Geographical distribution of species. — Three species of *Ametalla* are known at present, all inhabitants of Australia.

1. *A. Spinola*, Hope, Col. Mon. Vol. 3, p. 180, pl. 2, f. 5 (1840), Lacordaire, Mon. Phyt. Vol. 1, p. 88 (1845) (Australia).
2. *A. stenodera*, Lacordaire, Mon. Phyt. Vol. 1, p. 89 (1845) (Australia).
3. *A. W-nigrum*, Westwood, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 272 (1864) (Australia).

GROUP ORSODACNINÆ

The species of this group have their eyes round, generally entire, antennæ filiform, inserted below the eyes, widely separated; thorax narrowed at the base, much narrower than the elytra, the lateral margins indistinct or absent, elytra elongate; femora somewhat thickened, the posterior ones in a more marked degree, claws sub-bifid or appendiculate; prosternum narrow (*Hemydacne* excepted), the anterior coxal cavities closed.

A single genus (*Orsodacna*) has been the sole representative of this group according to Lacordaire and Chapuis; Thomson in his *Scandinaviens Coleoptera* has included, I think rightly, *Syneta* and *Zeugophora*. In all, the antennæ are widely separated and inserted just below or close to the eyes and the thorax is more or less devoid of lateral margins. *Chaleolema* Jacoby, is likewise included here although the thorax is distinctly margined, the genus is however so aberrant and contains such a mixture of characters that unless it is regarded as forming a special group, the present place is as good as any other of the allied groups.

1. GENUS ORSODACNA, LACORDAIRE

Orsodacna. Lacordaire, Mon. Phyt. Vol. 1, p. 71 (1845).

Characters. — Head subtriangular, broad in front, eyes large, antennæ filiform, the terminal joints somewhat widened; maxillary palpi with the fourth joint as long or longer than the second, the third scarcely half as long; tongue large, widened in front and emarginate, bilobate, the lobes strongly rounded; thorax as broad as long, sometimes broader, more or less constricted towards the base, much narrower than the elytra, the latter irregularly punctured; legs moderately stout, the posterior femora not thicker than the others, the tibiæ gradually widened towards the apex, armed at the latter place with two small spines, the first joint of the posterior tarsi, nearly as long as the following two joints together, claws almost bifid; the genus contains at least 10 species, many of them very variable.

Geographical distribution of species. — Most of the species, inhabit Europe or America, both North and South, from Ceylon and the Isle of Woodlark a single species is known.

1. *O. atra*, Ahrens, Neue Schrift. Halle, Vol. 1, p. 46 (North America).

var. *Childreni*, Kirby, Fauna, Amer. Bor. Vol. 4, p. 221 (1837).

var. *hepatica*, Say, Journ. Acad. Philad. Vol. 5, p. 281 (1827).

var. *ruficollis*, Newman, Ent. Mag. Vol. 5, p. 391 (1838).

var. *luctuosa*, Lacordaire, Mon. Phyt. p. 72 (1845).

var. *tibialis*, Kirby, Fauna Bor. Amer. Vol. 4, p. 221 (1837).

var. *trivittata*, Lacordaire, Mon. Phyt. p. 71 (1845).

var. *tricolor*, Melsheimer, Proc. Acad. Philad. p. 160 (1847).

var. *vittata*, Say, Journ. Acad. Philad. p. 430 (1823).

var. *armeniaca*, Germar, Ins. Spec. Nov. p. 526.

2. *O. cerasi*, Linné, Syst. Nat. Vol. 10, p. 376 (1758) (Europe).

Crioceris chlorotica, Olivier, Enc. Meth. Vol. 7, p. 203 (1792).

Lema julvicollis, Fabricius, Ent. Syst. Vol. 1, p. 5 (1792).

Orsodacna lineola, Lacordaire, Mon. Phyt. p. 76 (1848).

O. limbata, Olivier, Ent. Vol. 7, p. 754 (1791).

Crioceris glabratis, Panzer, Ent. Germ. p. 170 (1795).

Crioceris cantharoides, Fabricius, Syst. Ent. p. 120 (1775).

O. glabrata, Duftschmid, Fauna Austr. Vol. 3, p. 249 (1825).

3. *O. lineola*, Panzer, Ent. Germ. p. 170 (1795) (Europe).
O. nigriceps, Latreille, Gen. Crust. et Ins. Vol. 3, p. 44 (1807).
O. mespili, Lacordaire, Mon. Phyt. p. 73 (1845).
O. nigricollis, Olivier, Ent. Vol. 6, p. 753 (1808).
O. marginella, Duftschmid, Fauna Austr. Vol. 3, p. 248 (1825).
O. humeralis, Latreille, Hist. Nat. Crust. et Ins. Vol. 9, p. 350 (1804).
O. ruficollis, Pic, var. *cærulescens*, Duftschmid, Fauna Austr. Vol. 3, p. 248 (1825).
O. nemaloides, Lacordaire, Mon. Phyt. p. 84 (1845).
var. *croatica*, Weise, Deutsch. Ent. Zeit. p. 251 (1883).
4. *O. grandis*, Philippi, Stett. Ent. Zeit. p. 385 (1864) (Valdivia).
5. *O. indica*, Mothschulsky, Bull. Soc. Nat. Mosc. p. 406 (1866) (Ceylan).
6. *O. splendida*, Montrouzier, Ann. Soc. Agr. Lyon, p. 66 (1857) (Isle of Woodlark).
7. *O. tessellata*, Blanchard, Gay, Hist. fis. Chile, Vol. 5, p. 527 (Chili).
8. *O. unicolor*, Blanchard, idem (Chili).
9. *O. variabilis*, Baly, Ann. Mag. Nat. Hist. (4), Vol. 20, p. 377 (1877) (Kurdistan).

2. GENUS SYNETA, ESCHSCHOLTZ

Syneta. Eschscholtz, Dejean, Cat. (ed. 3), p. 385 (1837); Lacordaire, Mon. Phyt. Vol. 1, p. 226 (1845).

Characters. — Of narrow and elongate shape, labrum rounded, maxillary palpi short, second joint subconique, third oval, longer than the two preceding joints together; antennæ slender, filiform, nearly as long as the body, the joints cylindrical, the second one shorter than the other; thorax slightly narrowed anteriorly and posteriorly, widened at the middle, the sides with a tooth, the lateral margins distinct; elytra wider at the base than the thorax, punctured in rows, the interstices more or less raised; prosternum invisible between the coxæ which are joined, the intermediate ones only slightly separated; legs long and slender as well as the tarsi; the third joint deeply bilobed, the claws bifid, the inner division very short.

Geographical distribution of species. — *Syneta* is represented in Europe by a single species, others are found in North America and Japan.

1. *S. albida*, Leconte, Rep. Surv. Vol. 9, p. 66 (1857) (Oregon).
2. *S. carinata*, Mannerheim, Bull. Soc. Nat. Mosc. p. 307 (1843) (Sitkha).
3. *S. costata*, Newman, Ent. Mag. Vol. 5, p. 391 (1838) (America bor.).
4. *S. ferruginea*, Germar, Neue Schrift. Ges. Halb. Vol. 1, p. 36 (North America).
5. *S. simplex*, Leconte, Rep. Surv. Vol. 9, p. 66 (1857) (North America).
6. *S. adamsi*, Baly, Ann. Mag. Nat. Hist. Vol. 20, (4), p. 378 (1877) (Japan, Mantschuria).
7. *S. betulæ*, Fabricius, Ent. Syst. Weise Insekt. Deutsch. Vol. 1, 2, p. 5 (Lappland, Sweden).
8. *S. hamata*, Horn, Trans. Amer. Ent. Soc. Vol. 20, p. 133 (North America).

3. GENUS ZEUGOPHORA, KUNZE

Zeugophora. Kunze, Neue Schr. Naturf. Ges. Halle, Vol. 2, p. 4 (1818); Lacordaire, Mon. Phyt. Vol. 1, p. 233 (1845); Redtenbacher, Fauna Austr. (2^d ed.), p. 885 (1858); Weise, Insekt. Deutschl. Vol. 6, p. 55 (1893).

Synon. **Auchenia.** Thunberg, Nov. Act. Ups. Vol. 5, p. 116 (1789); **Crioceris.** Fabricius, Syst. Eleuth. Vol. 1, p. 461 (1801); **Taraxis.** Leconte, Col. of Lake Super. p. 237 (1850).

Characters. — Body elongate, sparingly pubescent, head broader than long, antennæ about half the length of the body, rather short, eyes large, slightly emarginate; thorax subquadrate, tuberculâte at the sides, scutellum small, triangular; elytra nearly parallel, irregularly punctured, legs short, the first joint of the tarsi long, the second short, claws appendiculate.

Geographical distribution of species. — *Zeugophora* is found in Europe, part of Asia and in North America, the Indian species described by Hope belong to the *Galerucidæ*.

1. *Z. abnormis*, Leconte, Agass. Lake Super. p. 237 (1850) (North America).
2. *Z. Kirbyi*, Baly, Ent. Month. Mag. Vol. 1, p. 183 (1864) (North America).
3. *Z. californica*, Crotch, ? Trans. Amer. Ent. Soc. Vol. 5, p. 78 (Oregon).
4. *Z. consanguinea*, Crotch, Proc. Acad. Philad. Nat. Sc. p. 23 (1873) (Illinois).
5. *Z. pubercule*, Crotch, idem, p. 23 (1873) (Illinois).
6. *Z. varians*, Crotch, ibidem, p. 23 (1873) (North America).
7. *Z. bimaculata*, Kraatz, Deutsch. Ent. Zeit. p. 129 (1879) (Amour River).
8. *Z. apicalis*, Motschulsky Bull. Soc. Nat. Mosc. Vol. 2, p. 406 (1866) (Ceylon).
9. *Z. flavicollis*, Marshall, Ent. Brit. 1, p. 217 (Europe).
10. *Z. scutellaris*, Suffrian, Stett. Ent. Zeit. p. 99 (1840) (Germany).
var. *frontalis*, Suffrian, idem, p. 100.
11. *Z. subspinosus*, Fabricius, Spec. Ins. Vol. 1, p. 155 (1781) (Europe).
12. *Z. Turneri*, Power, The Zoologist, p. 8735 (1863) (Europe).
var. *rufostictus*, Kraatz, Berl. Ent. Zeit. p. 162 (1871).
13. *Z. anchora*, Reitter, Wien, Ent. Zeit. p. 164 (1900) (Central Asia).
var. *pseudanchora*, Reitter, idem, p. 165.

EXPLANATION OF PLATE

- Fig. 1. *Megamerus Kingi*, Mac Leay.
 — 2. *Rhagiosoma madagascariensis*, Chapuis.
 — 3. *Carpophagus Banksiae*, Mac Leay.
 — 4. *Mecynodera coxalgica*, Boisduval.
 — 5. *Diaphanops Westermanni*, Boheman.
 — 6. *Polyoptilus Lacordairei*, Germar.
 — 7. *Chiloxena insignis*, Blackburn.
 — 8. *Ametalla Spinola*, Hope.
 — 9. *Sagra striatipennis*, Jacoby.
 — 10. — *ferox*, Baly.
 — 11. — *papuana*, Jacoby.
 — 12. — *Buqueti*, Lesson.

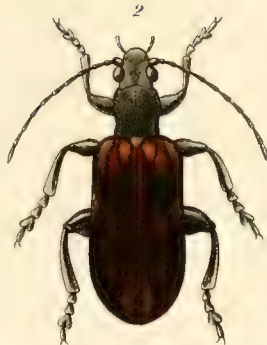
London, 15th April 1903.



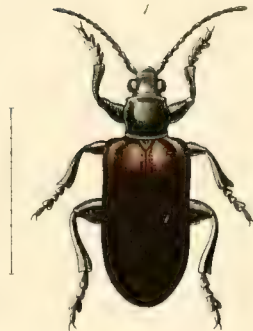
Mecynodera coxalgica, Boisduval.



Carpophagus Banksia, Mac Leay.



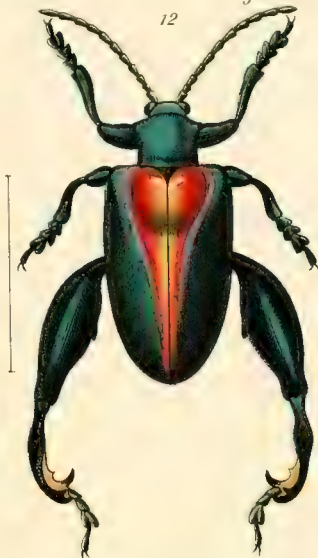
Rhagiosoma madagascariensis, Chapuis.



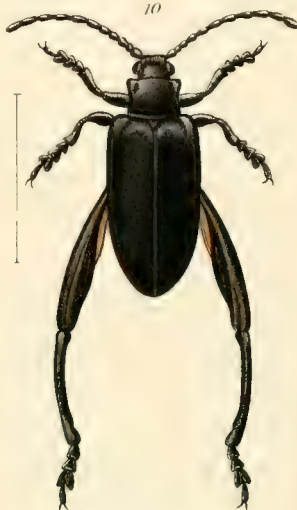
Megamerus Kingi, Mac Leay.



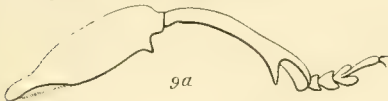
Sagra striatipennis, Jacoby.



Sagra Buqueti, Lesson.



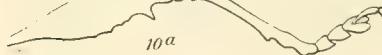
Sagra ferox, Baly.



9a



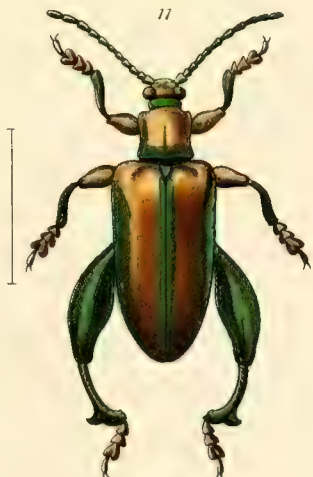
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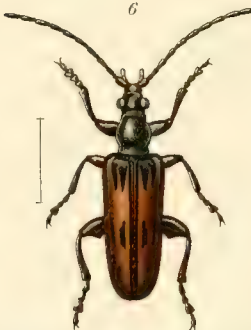
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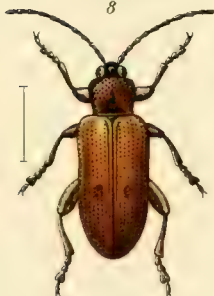
Diaphanops Westerni, Boheman.



Sagra papuana, Jacoby.



Polyoptilus Lacordairei, Germar.



Ametalla Spinola, Hope.



11a



Cheiloxena insignis, Blackburn.

FAM. SAGRIDÆ